

REMARKS

Upon entry of the present Preliminary Remarks, claims 1-3, 6, 10, 14 and 16-20 remain in the application, of which claims 1, 6, and 17 are independent.

It is contended that by the present Preliminary Remarks, which should be read in conjunction with previously filed Amendment-C of April 26, 2007, all bases of objections and rejections set forth in the Office Action have been traversed and overcome. Accordingly, reconsideration and withdrawal of the objections and rejections is respectfully requested.

Request for Reconsideration

At item 11 of the Advisory Action, the Examiner states that the request for reconsideration (included in the Amendment-C of April 26, 2007) does not place the application in condition for allowance because, in his view, (1) the scope of the invention as claimed does not exclude the thermal insulation properties of the casting die; (2) although the JP 2002-060845 (JP '845) does not disclose lubrication, JP 10-204610 (JP '610) does show that feature to be conventional; and (3) there is no negative teaching as why these two JP reference can not be combined.

Applicant's Response:

Upon careful consideration, applicant respectfully submits that the applied references, considered either singly or in any reasonable combination, fail to provide the claimed invention for several reasons, including those given below.

Initially, applicant respectfully submits that the disclosure of JP '610 is related to a forging die – where metal is shaped by plastic deformation under great pressure into high strength parts, whereas the disclosure of JP '845 is related to a casting die (like the present

invention) – where metal is shaped by a process involving pouring or injecting molten metal into a mold containing a cavity with the desired shape of the casting.

Since the applied references are related to significantly different apparatus/methods, which achieve different results (forged products vs. cast products), a person of ordinary skill in the art would not consider it obvious to combine select teachings of the applied, as proposed by the Examiner, to provide the claimed casting die. Accordingly, in contrast to the Examiner's allegation, there is negative teaching as why these two JP references can not be combined.

Further, applicant respectfully submits the disclosure of JP '610 is related to a forging die having thermal insulation properties, whereas the claimed casting die requires thermal shock resistance properties to minimize heat cracking and the chipping of the casting die so as to prolong service life of the casting die, as detailed in the specification of the present invention. The claimed invention relates to the casting die for receiving, cooling and solidifying a molten metal, and does not require thermal insulation properties.

The features of the claimed invention – e.g., compressive residual stress of cavity surface larger than 1200 MPa, maximum height of roughness of cavity not more than 8 μm , a nitrided layer provided at a surface layer of the cavity surface, etc. – are required to obtain desired thermal shock resistance properties for the casting die. Applicant respectfully submits that the references of record including JP'845, JP'610 and Nakagawa et al., considered either singly or in combination, fail to provide the claimed casting die and surface treatment method having such features.

Further, with these features, an excellent effect which cannot be expected from JP'845 and/or JP'610 is obtained, i.e., minimization of frictional resistance between cast product and the casting die, minimization of cracking and chipping of casting die, prolonged life of the casting

die, etc. Therefore, the present invention is not obvious over the disclosures of JP'610, JP'845 and Nakagawa et al., considered either singly or in combination.

For all of the foregoing reasons, applicant requests reconsideration and withdrawal of the rejection of claims 1-3, 6, 10, 14 and 16-20 under 35 USC §103(a).

Conclusion

Based on all of the foregoing, applicant respectfully submits that all of the objections and rejections set forth in the Office Action are overcome, and that all of the pending claims are believed to be allowable over all of the references of record, whether considered singly or in any reasonable combination.

It is applicant's contention that no possible reading of the references, either singly or in any reasonable combination, can be viewed as teaching applicant's claimed invention.

For all of the above mentioned reasons, applicant requests reconsideration and withdrawal of the rejection of record, and allowance of each of the pending claims.

A Request for Continued Examination (RCE) is being concurrently filed with the present Preliminary Remarks, and fee for same is being paid online via EFS-Web.

A petition for one-month extension of time period is being concurrently filed, and fee for same is being paid online via EFS-Web.

If any issues remain unresolved, applicant respectfully requests that the Examiner telephonically contact applicant's undersigned representative to expedite prosecution of the application.

Favorable consideration is respectfully requested.

Respectfully submitted,



Customer No. 21828

Carrier, Blackman & Associates, P.C.

24101 Novi Road, Suite 100

Novi, Michigan 48375

May 30, 2007

Joseph P. Carrier

Attorney for Applicant

Registration No. 31,748

(248) 344-4422

CERTIFICATE OF ELECTRONIC TRANSMISSION

I hereby certify that this correspondence is being electronically transmitted, via EFS-Web, to the United States Patent and Trademark Office, on May 30, 2007.



JPC/fs